

## ABSTRACT

A power supply system includes a power supply; a load coupled to the power supply via a power supply line to receive a voltage therefrom; and a circuit protection device. The circuit protection device includes at least one switch device coupled between the power supply and the load on the power supply line; a first controller coupled to the at least one switch for: A. monitoring current flow through the at least one switch; B. maintaining the at least one switch in an ON state while current flows through the at least one switch in a first direction; and C. causing the at least one switch to toggle to an OFF state if current flowing through the at least one switch flows in a second direction and a second controller coupled to the power supply line between the power supply and the at least one switch and coupled to the at least one switch for sensing an amount of current flowing between the power supply and the at least one switch and causing the at least one switch to toggle to the OFF state when the current sensed by the second controller exceeds a reference value.